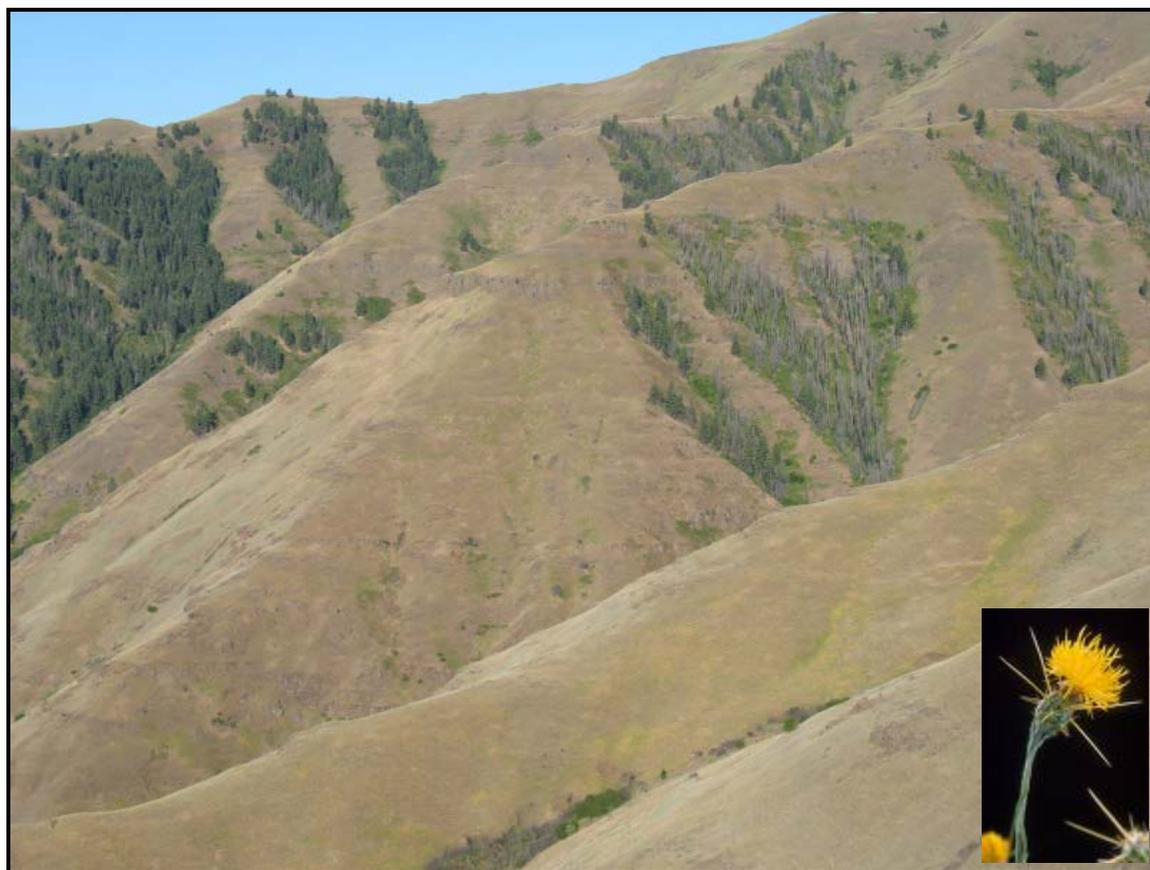


# **INVASIVE PLANT BIOLOGICAL ASSESSMENT**

## **Umatilla and Wallowa-Whitman National Forests**



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September 2008

This document is based upon the analysis completed for the Environmental Impact Statements for the Umatilla and Wallowa Whitman National Forest Invasive Plants Treatment Projects. This work was conducted by T.E.A.M.S: Planning Enterprise under the leadership of Chris Tootell, in coordination with staff of both the Wallowa-Whitman and Umatilla National Forests. The Effects Analysis were completed by the Following Individuals;

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# Chapter I

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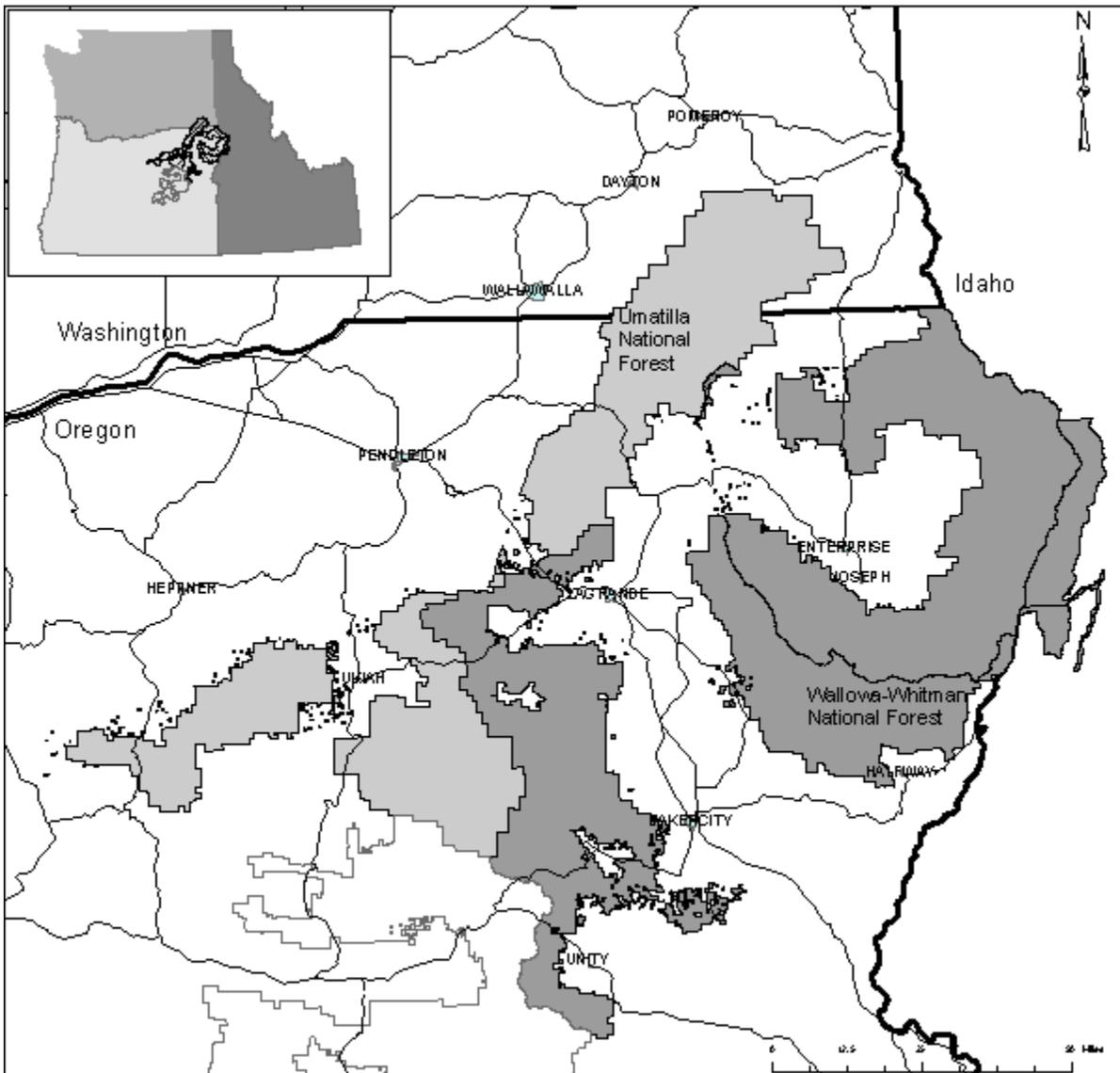
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## INTRODUCTION

This Biological Assessment documents the effects to endangered and threatened fish, wildlife and plant species from the proposed implementation of the Umatilla and Wallowa-Whitman National Forest's Invasive Species Environmental Impact Statements (EIS).

The Biological Assessment has been prepared to consider the site-specific environmental consequences of treating invasive plants over the next 10 years (until invasive plant objectives are met or until changed conditions or new information warrants the need for a new decision). This BA is tiered to the EIS, which is tiered to a broader scale analysis (the Pacific Northwest Region Final Environmental Impact Statement for the Invasive Plant Program, USDA 2005a, hereby referred to as the R6 2005 FEIS). This Biological Assessment is also tiered to the Programmatic Biological Assessment prepared in conjunction with R6 2005 FEIS.

## Action Area Description



## **UMATILLA NATIONAL FOREST**

The Umatilla National Forest (UNF) (See Vicinity Map above), located in the Blue Mountains of northeast Oregon and southeast Washington covers 1.4 million acres of diverse landscapes and plant communities. The lands are in Grant, Morrow, Umatilla, Union, Wallowa, and Wheeler Counties of Oregon, and Asotin, Columbia, Garfield, and Walla Walla Counties of Washington. The UNF has some mountainous terrain, but consists mostly of v-shaped valleys separated by narrow ridges or plateaus. The landscape also includes heavily timbered slopes, grassland ridges and benches, and bold basalt outcroppings. Elevation ranges from 1,600 to 8,000 feet above sea level.

Interstate Highway 84 divides the Forest roughly in half. The north half is bordered partially on the west by the Umatilla Indian Reservation and flanked by the Wallowa-Whitman National Forest to the southeast. The south half is bordered by the Wallowa-Whitman National Forest on the east and by the Malheur National Forest on the south. The headwaters of four large drainage basins are on the Forest: The Umatilla, John Day, Walla-Walla and Grande Ronde Rivers.

## **WALLOWA-WHITMAN NATIONAL FOREST**

The Wallowa-Whitman National Forest (WNF), (see Vicinity Map above) located in the northeast corner of Oregon and west central edge of Idaho, covers 2.3 million acres. It lies within Wallowa, Union, Baker, Malheur, Umatilla, and Grant Counties in Oregon and Adams, and Nez Perce Counties in Idaho. The WNF ranges in elevation from 875 feet on the Snake River in the bottom of the Hell's Canyon National Recreation Area to 9,845 feet in the Eagle Cap Wilderness of the Blue Mountains. The WNF is the largest administrative unit in the Pacific Northwest Region.

## **Action Area Definition**

The action area for this biological assessment is defined as all areas to be affected, directly or indirectly, by the proposed Federal action, and not merely the immediate area involved in the action. For purposes of this consultation, the action area includes the entire Umatilla and Wallowa-Whitman National Forests and those areas beyond National Forest System lands that may experience effects from the Proposed Action.

The potential effect of the action beyond National Forest System lands is defined by the mechanisms for herbicide movement (e.g., water, wind, carried by animals, water table, vehicles), soil movement (e.g., mass wasting, erosion), noise effects, and other water quality and stream habitat parameters (e.g., shade, temperature, bank stability, w/d ratio) associated with the control of invasive plants.

For purposes of analyzing the potential aquatic effects of this action beyond National Forest land, the analysis area used was all 4th field hydrologic unit code (HUC) watersheds containing National Forest System lands.

## **Action Area Setting**

Invasive plant infestations have been documented on nearly 25,000 acres (< 2 percent) of the Umatilla National Forest land base and 23,000 acres (1%) of the Wallowa-Whitman National Forest. Invasive plants are defined as “non-native plants whose introduction do or are likely to cause economic or environmental harm or harm to human health” (Executive Order 13122). Dale Bosworth (then Chief of the Forest Service), declared invasive species as one the four main threats to ecosystem health (USDA 2003). The threat is considered serious because invasive

plants have the potential to displace or alter native plant communities, and can increase fire hazards, degrade fish and wildlife habitat, eliminate rare and endangered plants, impair water quality and watershed health, and adversely affect a wide variety of other resource values such as recreational opportunities.

At present, 24 different invasive plant species are known to occur within the boundaries of the UNF and 40 species on the WNF. Species of greatest concern include spotted and diffuse knapweed, yellow starthistle, hound's tongue, Dalmation and yellow toadflax, scotch thistle, and rush skeletonweed, among others. The ability to prevent or minimize the adverse impacts to native plant communities by these and other invasive plants is greatest if populations can be treated while they are small and in the early stages of invasion. Many current infestations occupy small areas, less than an acre. Treatment options and the likelihood of their success are greater for small or new invasive populations and can be controlled at lower costs than once the infestation becomes large.

The Pacific Northwest Region published the programmatic Pacific Northwest Region Invasive Plant Program Preventing and Managing Invasive Plants FEIS (Regional Invasive Plant Program EIS), April 2005 along with its Record of Decision (ROD) for Invasive Plant Program Management on October 11, 2005 (Regional Invasive Plant Program EIS, ROD). This decision amended all Forest Plans in the Region, adding new direction for the control or elimination of invasive plant species using prevention and restoration practices, various mechanical and hand treatments, and an updated list of herbicides for effectively responding to invasive plant threats. The new herbicides approved or use offer many advantages over the more limited set allowed previously, including greater selectivity, less harm to desired vegetation, reduced application rates, and lower toxicity to animals and people. The ROD and Regional Invasive Plant Program EIS required that prior to the use of these new herbicides, site-specific treatment prescriptions for both new and previously analyzed invasive plant sites on the Forest need to be developed based on the updated herbicide tools and management direction.

The Umatilla National Forest has been treating invasive plants under direction found in the 1995 decision implementing the Umatilla National Forest Environmental Assessment (EA) for the Management of Noxious Weeds. The recommended treatment methods took a conservative approach, requiring years of manual or mechanical treatments on a site prior to the use of herbicides. Within that decision three herbicides were approved for use. It did not provide the ability to respond quickly to new infestations because the process covered only those sites known at the time of the 1995 decision.

The Wallowa-Whitman National Forest has been treating invasive plants under direction found in the 1992 decision implementing the Wallowa-Whitman National Forest Environmental Assessment (EA) for the Management of Noxious Weeds and Forest Plan Amendment 4 (1992 EA) and a 1994 Wallowa-Whitman Management of Noxious Weeds Environmental Assessment (1994 EA). The two EAs identified approximately 5,000 acres for treatment of 21 invasive plant species. The recommended treatment methods took a conservative approach, requiring years of manual or mechanical treatments on a site prior to the use of herbicides. These documents did not allow the Forest Service the ability to respond quickly to new infestations because the process only covered those sites known at that time. The two EAs authorized the use of four herbicides; however, one of these, dicamba, is restricted from use in Region 6 by the R6 2005 ROD.

Ten years of monitoring shows that the slow approach to the application of herbicides has not successfully reduced the impact and spread of invasive species (1991-2000 annual monitoring reports) (USDA 2001). The strategy is labor intensive sometimes requiring multiple visits to sites

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each year, and the budget was not always adequate to extensively control or eradicate target infestations. The limited funds were used to control weeds along major Forest system roads, providing funds to county weed boards for treatment costs. The Regional FEIS also provides evidence that using herbicides only as a tool of last resort is much less effective than allowing them to be used whenever they are effective, needed, and applied according to forest plan standards and label direction (USDA 2005). The dashed line in Figure 2 Chapter 3 shows the predicted exponential spread of weeds under the existing 1995 decision (No Action Alternative).

The Forests' staffs acknowledge the need for a new strategy that would 1) treat known infestations safely and effectively, and 2) identify and treat new infestations. The Proposed Action Alternative represented in Figure 1 by the solid line, predicts a considerable reduction of infested acres over time based on broad scale assumptions of high effectiveness and predicted rate of spread in the region.

An extensive, thorough inventory of invasive plant sites was completed by the UNF and WNF in 2006. The inventory, conducted district by district, compiled sites of known invasive plant infestations as shown in Table I- 1 and Table I- 2. This inventory is a compilation that includes an inventory completed in 1990, an update of that inventory done for the 1995 noxious weed EA, the districts' annual monitoring since then, and a recent inventory effort to complete a data base of all known invasive plant sites (See Treatment Site maps in Appendices H and I).

**Table I- 1– Invasive Plants Identified on the Umatilla NF and Number of Sites by District**

Scientific Name	Common Name	Districts No. of sites <sup>1</sup>			
		Heppner	Pomeroy	North Fork John Day	Walla Walla
<i>Articum minus</i>	Lesser burdock	7	1	3	6
<i>Cardaria draba</i>	Whitetop		2	6	1
<i>Carduus nutans</i>	Musk thistle			2	3
<i>Centaurea biebersteinii</i>	Spotted knapweed	1	54	63	98
<i>Centaurea diffusa</i>	Diffuse knapweed	442	151	131	463
<i>Centaurea repens</i>	Russian knapweed				1
<i>Centaurea solstitialis</i>	Yellow starthistle		22	2	18
<i>Chondrilla juncea</i>	Rush skeletonweed				3
<i>Cirsium arvense</i>	Canada thistle	15	48	26	240
<i>Cynoglossum officinale</i>	Houndstongue	10	26	110	154
<i>Cytisus scoparius</i>	Scotch broom	3			2
<i>Daucus carota</i>	Wild carrot				1
<i>Euphorbia esula</i>	Leafy spurge			2	53
<i>(Hieracium pratense 0</i>	Yellow hawkweed				4
<i>Hieracium aurantiacum</i>	Tall hawkweed			1	
<i>Hypericum perforatum</i>	St John's wort	242	36	36	247
<i>Lathyrus latifoliis</i>	Everlasting peavine			1	
<i>Linaria dalmatica</i>	Dalmation toadflax	82	29	7	6
<i>Linaria vulgaris</i>	Butter and eggs	4	1	8	1
<i>Onopordum acanthium</i>	Scotch thistle	6	19	8	6

<sup>1</sup> Since some sites have multiple invasive species, the total number of sites in this table exceeds the actual number of sites inventoried. That is, this table totals 3177 sites because of the multiple species overlap. The actual number of sites inventoried and mapped is 2069.

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Scientific Name	Common Name	Districts No. of sites <sup>1</sup>			
		Heppner	Pomeroy	North Fork John Day	Walla Walla
<i>Phalaris arundinacea</i>	Reed canary grass				1
<i>Potentilla recta</i>	Sulphur cinquefoil		2	88	62
<i>Senecio jacobaea</i>	Tansy ragwort	3	7	11	70
<i>Taeniatherum caput-medusae</i>	Medusahead			4	15
<b>Total (individual species occurrences)</b>		<b>815</b>	<b>398</b>	<b>509</b>	<b>1455</b>
Since some sites have multiple invasive species, the total number of sites in this table exceeds the actual number of sites inventoried. That is, this table totals 3177 sites because of the multiple species overlap. The actual number of sites inventoried and mapped is 2069, see Appendix B.					

**Table I- 2– Invasive Plants Identified on the Wallowa-Whitman NF and Number of Sites by District.**

Scientific Name	Common Name	Districts No. of sites					Grand Total
		Whitman	Wallowa- Valley	HCNRA	Eagle Cap	LaGrande	
<i>Acroptilon repens</i>	Russian knapweed	1		3			4
<i>Alopecurus myosuroides</i>	Blackgrass	0		1			1
<i>Anchusa officinalis</i>	Common bugloss	0		1			1
<i>Cardaria draba</i>	Hoarycress (Whitetop)	73	1	84		21	179
<i>Carduus nutans</i>	Musk thistle	3				3	6
<i>Centaurea diffusa</i>	Diffuse knapweed	85	128	47	16	108	384
<i>Centaurea maculosa</i>	Spotted knapweed	32	73	39	9	16	169
<i>Centaurea species</i>	Knapweed species	6	17	1		1	25
<i>Centaurea debeauxii</i>	Meadow knapweed	0			1		1
<i>Centaurea solstitialis</i>	Yellow starthistle	5	12	136		28	181
<i>Centaurea virgata</i>	Squarrose knapweed	2					2
<i>Chondrilla juncea</i>	Rush skeleton weed	2		34			36
<i>Cirsium arvense</i>	Canada thistle	86	4	18	6	40	154
<i>Cirsium vulgare</i>	Bull thistle	0				2	2
<i>Convolvulus arvensis</i>	Field bindweed	1					1
<i>Conium maculatum</i>	Poison hemlock	1		2			3
<i>Crupina vulgaris</i>	Common crupina	0	1				1
<i>Cuscuta sp.</i>	Dodder	1		1			2
<i>Cynoglossum officinale</i>	Houndstongue	63				1	64
<i>Cytisus scoparius</i>	Scotch broom	1	1			2	4
<i>Dipsacus fullonum</i>	Teasel	2					2
<i>Euphorbia esula</i>	Leafy spurge	3	1	1		7	12
<i>Polygonum cuspidatum</i>	Japanese knotweed	0		2			2
<i>Hieracium caespitosum</i>	Yellow hawkweed	0	1	4	24		29
<i>Hypericum perforatum</i>	St john's wort	52		4			56
<i>Lepidium latifolium</i>	Pepperweed	1					1
<i>Linaria dalmatica</i>	Dalmation toadflax	47	60	18	1	4	130
<i>Linaria sp.</i>	Toadflax species	0	3				3

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Scientific Name	Common Name	Districts					
		No. of sites					
		Whitman	Wallowa-Valley	HCNRA	Eagle Cap	LaGrande	Grand Total
<i>Linaria vulgaris</i>	Yellow toadflax	5	2	1			8
<i>Lythrum salicaria</i>	Purple loosestrife	0		3			3
<i>Onopordum acanthium</i>	Scotch thistle	20	37	95		5	157
<i>Potentilla recta</i>	Sulphur cinquefoil	30	1			3	34
<i>Rubus discolor</i>	Himalayan blackberry	0		3			3
<i>Salvia aethiopsis and Salvia sclarea</i>	Mediterranean and clary sage	0		1			1
<i>Salsola tragus</i>	Russian thistle	1					1
<i>Senecio jacobaea</i>	Tansy ragwort	9	2	1	1	36	49
<i>Senecio sp.</i>	Senecio species	0	3	1			4
<i>Solanum elaeagnifolium</i>	silverleaf nightshade	0		2			2
<i>Taeniatherum caput-medusae</i>	Medusahead	1		21			22
<i>Tribulus terrestris</i>	Puncturevine	0		1			1
<b>Totals</b>	<b>40 Species</b>	<b>533</b>	<b>347</b>	<b>525</b>	<b>58</b>	<b>277</b>	<b>1740</b>

## Purpose and Need

Weed infestations are one of the greatest ecological threats to public lands in the United States. Sizeable infestations can displace or alter native plant communities and cause long-lasting economic and ecological problems within and outside the National Forests. Weeds can spread rapidly across the landscape to non-infested areas, unimpeded by ownership or administrative boundaries, because of their strong reproductive and competitive abilities. There is a need to safely and effectively contain, control or eradicate nearly 25,000 acres of Invasive plant infestations that have been inventoried and mapped on the Umatilla National Forest and 23,000 acres on the Wallowa-Whitman National Forest. Further, there is a need to detect new infestations soon after they appear on the landscape and treat them quickly while they are still small. Each forest is preparing an EIS to allow the Forests to begin this process using Forest Plan direction as amended by the Regional Invasive Plant Program EIS, ROD. A large number of new and existing invasive plant populations on the UNF and WNF require analysis to implement new, more effective and cost-efficient treatment actions, which includes the use of the updated list of herbicides as analyzed in the Regional Invasive Plant Program EIS.

The weed infestations on the Forests are broadly distributed, often occurring in areas of high spread potential (e.g., along roads and trails). There are probable additional invasive plant sites that have not yet been identified and these, as well as known sites, will continue to expand and spread every year that effective treatment is not applied.

The Purpose of this action is to provide a rapid and more comprehensive up to date approach to the control and eradication of invasive plants that occur on National Forest System lands. The purpose of controlling or eradicating weed infestations is to maintain or improve the diversity, function, and sustainability of desired native plant communities and other natural resources that can be adversely impacted by invasive plant species. Specifically, there is an underlying need on the Forest to: (1) implement treatment actions to contain, control and eradicate the extent of invasive plants at existing inventoried sites, and (2) rapidly respond to new or expanded invasive

plant sites as they may occur in the future. Without action, invasive plant populations will become increasingly difficult and costly to control and will further degrade forest and grassland ecosystems. Untreated infested areas will also contribute to the spread of invasive plants onto neighboring lands.

## **MANAGEMENT DIRECTION**

The process and documentation for each Forest's EIS has been completed according to direction contained in the National Forest Management Act (NFMA), the National Environmental Policy Act (NEPA), and the Council on Environmental Quality regulations, Clean Water Act, and the Endangered Species Act. The project is consistent with all applicable Federal, State and local laws. These EISs tier to the following documents:

- Umatilla National Forest Land and Resource Management Plan Final Environmental Impact Statement and Record of Decision (1990);
- Wallowa-Whitman National Forest Land and Resource Management Plan Final Environmental Impact Statement and Record of Decision (1990);
- and incorporates by reference the accompanying Land and Resource Management Plan (LRMP, also called the Forest Plan) (1990), as amended by the Pacific Fish Strategy (PACFISH) (1995) where appropriate,
- and the Regional Invasive Plant Program EIS and ROD (2005).

The Federal Noxious Weed Act of 1974, as amended (7 U.S.C 2801 et seq.) requires cooperation with State, local, and other Federal agencies in the application and enforcement of all laws and regulations relating to management and control of noxious weeds (a summary of this act can be viewed at: <http://ipl.unm.edu/cwl/fedbook/fedweed.html> ). This Act directs the Secretary of Agriculture to develop and coordinate a management program for control of undesirable plants which are noxious, harmful, injurious, poisonous, or toxic on Federal lands under the agency's jurisdiction, to establish and adequately fund the program, to complete and implement cooperative agreements and/or memorandums, and to establish Integrated weed management to control or contain species identified and targeted under cooperative agreements and/or memorandums.

U.S. Forest Service Manual 2080 directs the Forest Service to use an integrated weed management approach to control and contain the spread of noxious weeds on National Forest System (NFS) lands and from NFS lands to adjacent lands (USDA Forest Service 1995a). Integrated weed management is an interdisciplinary pest management approach by which one selects and applies a combination of management techniques that, together, control a particular invasive plant species or infestation efficiently and effectively, with minimum adverse impacts to non-target organisms. Integrated weed management is typically species- and site-specific, and includes education, preventive measures, early detection of infestations through inventory and mapping, and combinations of treatment methods as needed to effectively control the target species.

Executive Order 13112 (1999) directs federal agencies to reduce the spread of invasive plants. Invasive species have been identified by the current Chief of the Forest Service as one of the four threats to ecosystem health.

The Forest Service Guide to Noxious Weed Prevention Practices provides management guidance in the form of goals along with prevention practices (USDA Forest Service 2001). Forest Service policy identifies prevention of the introduction and establishment of noxious weed infestations as an agency objective. This Guide provides a comprehensive directory of weed prevention practices for use in Forest Service planning and wildland resource management activities and operations.

In October 2004, the Chief of the Forest Service released a National Strategy and Implementation Plan for Invasive Plant Species Management – part of the President’s Healthy Forest Initiative. The Chief’s strategy focuses on four key elements: preventing invasive species before they arrive; finding new infestations before they spread and become established; containing and reducing existing infestations; and rehabilitating and restoring native habitats and ecosystems.

### **Regional Direction**

Forests in Region Six follow management direction introduced to all Land and Resource Management Plans by the Record of Decision (ROD) for Managing Competing and Unwanted Vegetation (1988 ROD), and the subsequent 1989 Mediated Agreement. The 1988 ROD specified and limited the tools available for the treatment of competing and unwanted vegetation, but did not provide administrative mechanisms for adapting new technologies. Herbicides approved for use by the Forest Service at that time were developed before 1980.

The recently published Pacific Northwest Region (Region Six) Invasive Plant Program – Preventing and Managing Invasive Plants Final Environmental Impact Statement and the accompanying Record of Decision (2005) currently supersedes direction from those documents to provide invasive plant management direction to the Forests in Region Six.

The 2005 R6 ROD added goals, objectives, and standards for invasive plant management to the Umatilla and Wallowa-Whitman National Forests’ LRMPs (See Forest Direction section), and replaces the requirements of the 1989 Mediated Agreement dealing with the treatment of invasive plants. All other vegetation management activities on the Forests will still be bound by the 1989 Mediated Agreement.

### **Forest Direction**

Current management direction for the treatment of invasive plants is derived from the following sources:

- The Umatilla National Forest Land and Resource Management Plan (Forest Plan as amended by the Pacific Northwest Region Invasive Plant Program, Record of Decision 2005)
- Environmental Assessment for the Management of Noxious Weeds (April 1995), as amended
- Wallowa-Whitman National Forest Land and Resource Management Plan Final Environmental Impact Statement and Record of Decision (1990);
- Wallowa-Whitman National Forest Environmental Assessment (EA) for the Management of Noxious Weeds and Forest Plan Amendment 4 (1992 EA); and
- Wallowa-Whitman Management of Noxious Weeds Environmental Assessment (1994 EA).

Specific Standards and Guidelines from the Forest Plan that apply to this project can be reviewed in Appendix A.

Separate biological evaluations and/or biological assessments were completed for botanical species, aquatic species, and terrestrial wildlife species for this analysis or as part of the consultation process with the National Marine Fisheries Service and the US Fish & Wildlife Service. The Project Records are located at the Umatilla National Forest Office in Pendleton, Oregon and at the Wallowa-Whitman National Forest Office in Baker City, Oregon.

Specific goals and objectives for invasive plant management added to the Forest Plan by the R6 2005 ROD are listed below. Specific Standards and Guidelines from the R6 2005 ROD that apply to this project can be reviewed in Appendix A.

**Goal 1** - Protect ecosystems from the impacts of invasive plants through an integrated approach that emphasizes prevention, early detection, and early treatment. All employees and users of the National Forest recognize that they play an important role in preventing and detecting invasive plants.

- Objective 1.1 Implement appropriate invasive plant prevention practices to help reduce the introduction, establishment and spread of invasive plants associated with management actions and land use activities.
- Objective 1.2 Educate the workforce and the public to help identify, report, and prevent invasive plants.
- Objective 1.3 Detect new infestations of invasive plants promptly by creating and maintaining complete, up-to-date inventories of infested areas, and proactively identifying and inspecting susceptible areas not infested with invasive plants.
- Objective 1.4 Use an integrated approach to treating areas infested with invasive plants. Utilize a combination of available tools including manual, cultural, mechanical, herbicides, biological control.
- Objective 1.5 Control new invasive plant infestations promptly, suppress or contain expansion of infestations where control is not practical, conduct follow up inspection of treated sites to prevent reestablishment.

**Goal 2** - Minimize the creation of conditions that favor invasive plant introduction, establishment and spread during land management actions and land use activities. Continually review and adjust land management practices to help reduce the creation of conditions that favor invasive plant communities.

- Objective 2.1 Reduce soil disturbances while achieving project objectives through timber harvest, fuel treatments, and other activities that potentially produce large amounts of bare ground
- Objective 2.2 Retain native vegetation consistent with site capability and integrated resource management objectives to suppress invasive plants and prevent their establishment and growth
- Objective 2.3 Reduce the introduction, establishment and spread of invasive plants during fire suppression and fire rehabilitation activities by minimizing the conditions that promote invasive plant germination and establishment

- Objective 2.4 Incorporate invasive plant prevention as an important consideration in all recreational land use and access decisions. Use Forest-level Access and Travel Management planning to manage both on-highway and off-highway travel and travel routes to reduce the introduction, establishment and spread of invasive plants
- Objective 2.5 Place greater emphasis on managing previously “unmanaged recreation” (OHVs, dispersed recreation, etc.) to help reduce creation of soil conditions that favor invasive plants, and reduce transport of invasive plant seeds and propagules.

**Goal 3** - Protect the health of people who work, visit, or live in or near National Forests, while effectively treating invasive plants. Identify, avoid, or mitigate potential human health effects from invasive plants and treatments.

- Objective 3.1 Avoid or minimize public exposure to herbicides, fertilizer, and smoke
- Objective 3.2 Reduce reliance on herbicide use over time in Region Six

**Goal 4** – Implement invasive plant treatment strategies that protect sensitive ecosystem components, and maintain biological diversity and function within ecosystems. Reduce loss or degradation of native habitat from invasive plants while minimizing adverse effects from treatment projects.

- Objective 4.1 Maintain water quality while implementing invasive plant treatments
- Objective 4.2 Protect non-target plants and animals from negative effects of both invasive plants and applied herbicides. Where herbicide treatment of invasive plants is necessary within the riparian zone, select treatment methods and chemicals so that herbicide application is consistent with riparian management direction contained in PACFISH, INFISH, and the Aquatic Conservation Strategies of the Northwest Forest Plan
- Objective 4.3 Protect threatened, endangered, and sensitive species habitat threatened by invasive plants. Design treatment projects to protect threatened, endangered, and sensitive species and maintain species viability.

## Consultation History

Consultations for existing invasive species treatments on the Umatilla National Forest have a somewhat complicated history. The treatment actions are covered under a 1995 Record of Decision, which pre-dated most ESA listings on the Forest. As a consequence, invasive species treatments were bundled with on-going actions and included in geographic scale Biological Assessments. The consultation history for the WNF is similar. Treatment actions were covered under decision notices for environmental assessments in 1992 and 1994, which predated most ESA listings on the Forest. As a consequence, invasive species treatments were bundled with on-going actions and included in geographic scale Biological Assessments and also through consultation on individual actions.

With the completion of the 2005 R6 Invasive Plant FEIS and ROD, specific goals and objectives for invasive plant management were added to the UNF and WNF Plans. This Biological Assessment (BA) is tiered to the BA completed 2005 R6 ROD and includes the site specific analysis for the Forests.

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A primary focus of the site-specific analysis was development of Project Design Features (PDFs) to insure compliance with standards adopted by R6 as well as forest standards and guidelines. Information used to design criteria to minimize effects from treatment included properties of herbicides from SERA risk assessments, properties of soils in relation to herbicide properties, proximity of treatment sites to streams, stream/road connectivity, and acres of proposed treatment for each 5th field watershed.

## Species or Critical Habitat Covered

**Table I- 3- Federally listed or candidate species known to occur on the Umatilla and Wallowa-Whitman National Forests.**

Species	Scientific Name	Status	Critical Habitat	Presence
<b>Aquatic Species</b>				
Snake River Spring/Summer Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	Threatened	Yes	Yes
Snake River Fall-run Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	Threatened	Yes	Yes
Snake River Steelhead	<i>Oncorhynchus mykiss</i>	Threatened	Yes	Yes
Mid-Columbia Steelhead	<i>Oncorhynchus mykiss</i>	Threatened	Yes	Yes
Columbia River Bull Trout	<i>Salvelinus confluentus</i>	Threatened	Yes (potential effects to non Federal land)	Yes
<b>Terrestrial Wildlife</b>				
Gray wolf	<i>Canis lupus</i>	Endangered	None	No
Columbia spotted frog	<i>Rana luteiventris</i>	Candidate	None	Yes
<b>Plants</b>				
Spalding's catchfly	<i>Silene spaldigii</i>	Threatened	None	Yes
MacFarlane's four o'clock	<i>Mirabilis macfarlanei</i>	Threatened	None	Yes